

## A METHOD AND APPARATUS FOR CAPTURING EVENT TRACES FOR DEBUG AND ANALYSIS

### 5 ABSTRACT OF THE DISCLOSURE

10 A trace array having M entries with corresponding M addresses is used to store the states of input signals. The M addresses of the trace array are sequenced with a counter that counts a clock beginning at a starting count and counting to an ending count. If the ending count is exceeded, the counter starts over at the starting count. The counter outputs are decoded to addresses of the trace array. An event signal is generated on the occurrence of an operation of interest and the counter is started and stopped in response to sequences of the event signals, thus starting and stopping the recording of states of the input signals in the trace array. When an error or particular condition signal occurs, traces corresponding to the input signals are saved in the trace array. A start signal enables tracing and event logic generates event sequence signals which alternately start and stop the recording of traces. The event sequences are programmed by inputs to enable guaranteed statistical chances of capturing states of the input signals corresponding to a particular event signal occurring before an error or another event signal.

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